

THE
LUFKIN
LINE

The LUFKIN LINE

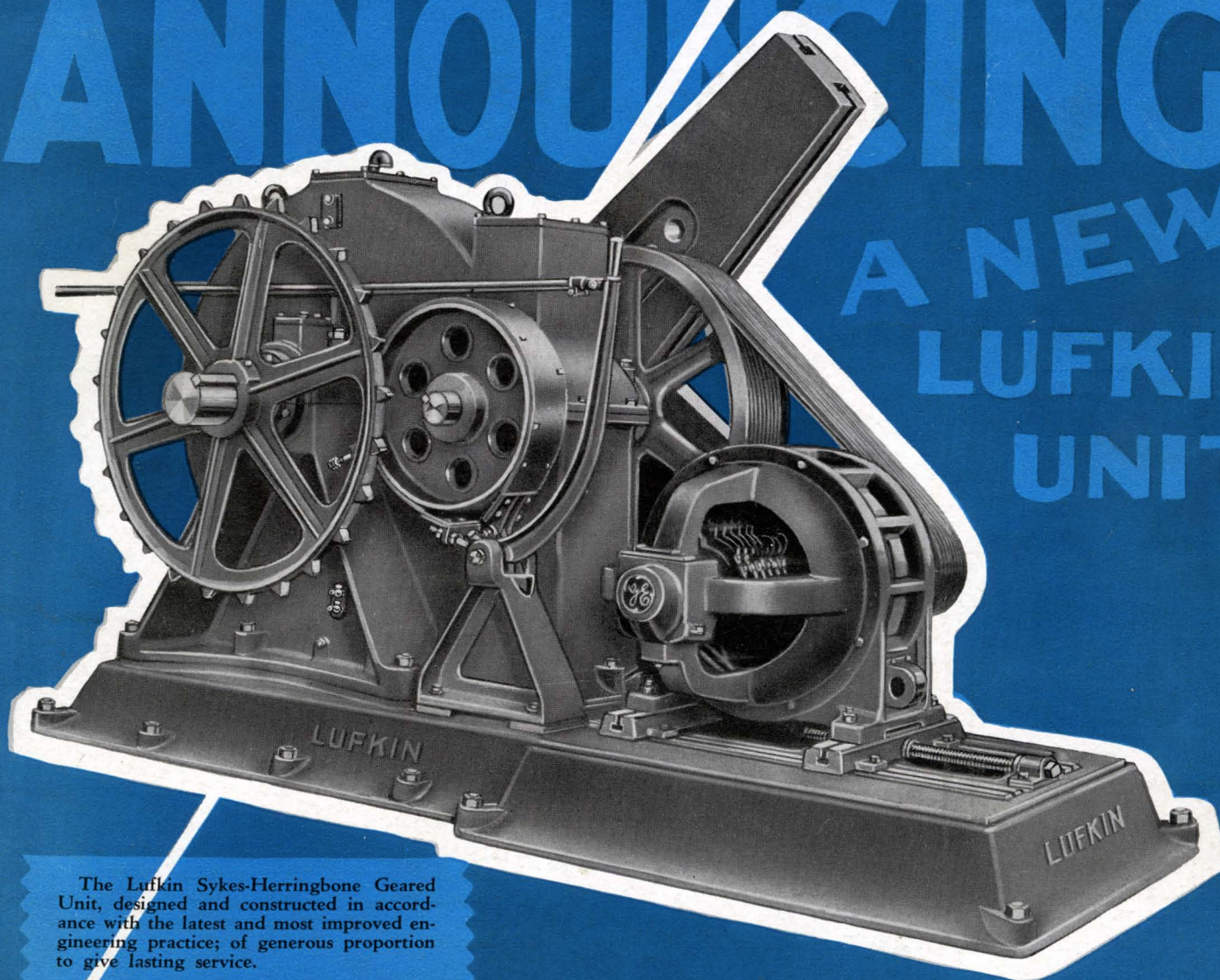


Vol. 10.

MARCH-APRIL, 1930

No. 2

ANNOUNCING
A NEW
LUFKIN
UNIT



The Lufkin Sykes-Herringbone Geared Unit, designed and constructed in accordance with the latest and most improved engineering practice; of generous proportion to give lasting service.



Old Man Winter

—“Winters” in
The “Sunny South”

Snow more than 1 inch deep every two or three years in Southeast Texas is very unusual. Scenes on this page give some idea of one of three snows in Lufkin, in the heart of East Texas, when a depth of 14 inches was recorded during the severe cold of the past winter.



SNOW SCENES IN LUFKIN

No. 1—Home of Dr. E. T. Clark; a prized snow picture.

No. 2—Home of W. C. Trout, Vice-President and General Manager, Lufkin Foundry & Machine Co.

No. 3—Temple of Justice, Angelina County Court House.

No. 4—Lake Myriad Country Club house, part of links and lake. The lake covering some ten acres entirely froze over.

No. 5—Angelina County Hospital. A modern up-to-date hospital with all the appointments and facilities of the best City hospital.



The NEW Herringbone Gear

By W. C. TROUT



W. C. TROUT

Vice President and General Manager, Lufkin Foundry & Machine Company; patentee of the Trout Counter-Balance Crank, Trout Universal Pitman and other improved oil field appliances.

SIX years ago we pioneered the application of worm gearing to oil well pumping rigs. We were led to adopt the worm gear because of its dependability, its simplicity, its compactness, and its quietness due to its smoothness in action, all of which in turn insured absence of shocks and

vibration. These characteristics likewise made for durability. The spiral or helical formation of the worm gear has the further feature of inducing an oil film between the teeth surfaces, which makes for almost perfect lubrication and has a great influence in the relatively high load carrying capacity of the gear. The performance of more than thirteen hundred Lufkin worm geared units over an operating period of more than six years has proved ample vindication of our judgment in its adoption.

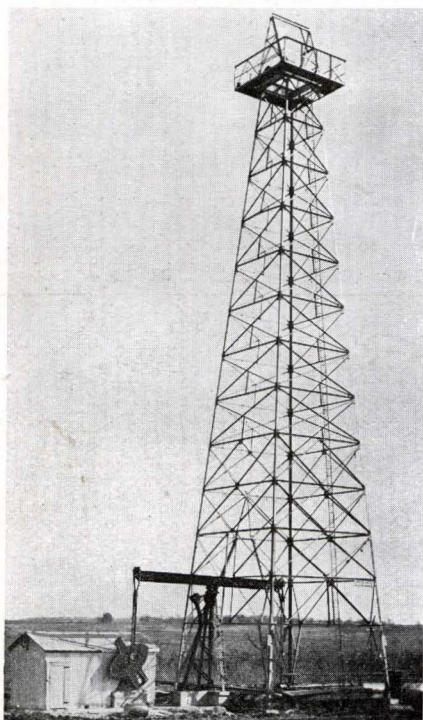
Notwithstanding the success of our worm geared unit, we have been, and still are, alert to any possibility of improvement in our pumping units. Quite recently a new type of helical gear has become available, which has what are called herringbone teeth. These gears are actually worm gears, the teeth of the pinions being in all respects identical with worm threads of a relatively long lead. The essential difference, however, between the new herringbone gear which we have adopted and the worm gear is that the shafts of both wheel and pinion are parallel to each other instead of at right angles, as in the worm gear.

A further difference, which is possible due to the shafts being parallel,

is that the pinion, or worm, can be arranged with right and left hand threads, or teeth. This has the great advantage of eliminating all end thrust and therefore no thrust bearing is needed and, consequently, expense is saved. In addition, there are less number of parts and therefore less possibility of trouble and a tendency toward reducing maintenance expense.

An additional advantage is that the sliding action of the teeth in motion is less than in the worm gear, while at the same time, due to the relatively large helix angle which can be used, the smoothness of operation and the property of efficient lubrication is maintained. The mechanical efficiency, therefore, of the herringbone gear is slightly better than that of the worm gear, especially at loads much less than the normal load. It must be understood, however, that the herringbone gear does not afford much advantage in efficiency compared with the high grade worm gear which we have used. Nevertheless

(Continued on page 4)



Typical Lufkin Herringbone Unit installation, Humble, Sallie Wilson No. 2; depth 2650 feet 2 1/4 inch tubing, 3/4 inch rods, production 1300 barrels. Photo, courtesy the Oil & Gas Journal.



Sykes-Herringbone Gear and pinion of the New Lufkin Unit. Note heavy construction of the gear.

High Grade Material Only Used In Gear and Pinion of New Herringbone Unit

Much research work has been done to select a material best suited for the conditions under which the Lufkin Herringbone Unit must operate. Lufkin engineers are confident that a steel and a heat treatment has been developed that will insure the longest life possible to obtain. Gears and pinions are generated in our own plant under the most exacting supervision. After cutting to within .003

of an inch the gear and pinion are matched by lapping in with ground glass and oil to precision on a special lapping machine manufactured for that purpose.

The lapping in process, together with continuity of tooth contact peculiar to the Sykes-Herringbone Gear insures almost absolute silence in operation and eliminates back lash.

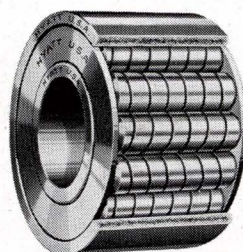
The New Herringbone Gear (Continued from page 3)

there is a slight advantage which is worth consideration.

Another advantage of the herringbone gear is that due to the reduced sliding motion it is possible to use a wheel made in steel instead of one having a phosphor bronze rim, as in the worm gear. This tends to lessen the manufacturing expense and the replacement expense.

We have placed a great number of these herringbone geared units in service and they have proved very satisfactory and are preferred by many of our customers.

While it is customary to drill in wells with the worm gear units, and some wells have been completely drilled with cable tools in at least equal time as the standard rig, we believe the Herringbone Type gear will give a better "fall" to cable tools than is possible with the worm gear due to its self locking nature, an especially valuable feature in pump-



HYATT BEARING

Hyatt Roller Bearings of generous proportions are used in the pinion shaft bearings of the New Lufkin Unit.

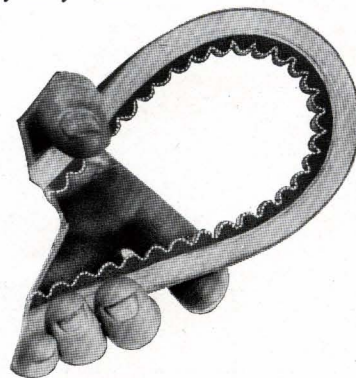
ing, another reason that led us to conclude to manufacture both types.

Before standardizing on these herringbone gears we made careful investigations to determine the best proportions of gears, both as regards diameters, face width and tooth proportions. We have adopted a specially strong tooth, which is desirable, not only on account of its strength, but also because it gives the best possible tooth action, the highest mechanical efficiency, and the utmost durability. We have also made careful investigations into the best ma-

terials to use, with a result that we have adopted a special alloy steel, heat treated to a definite hardness.

It will interest many of our friends to know that we have installed complete equipment at considerable cost for manufacturing these new herringbone gears in our own factory.

Many of our friends will be interested to see this new equipment in our plant and we shall be glad to give them a cordial welcome whenever they may call.



DAYTON COG BELT

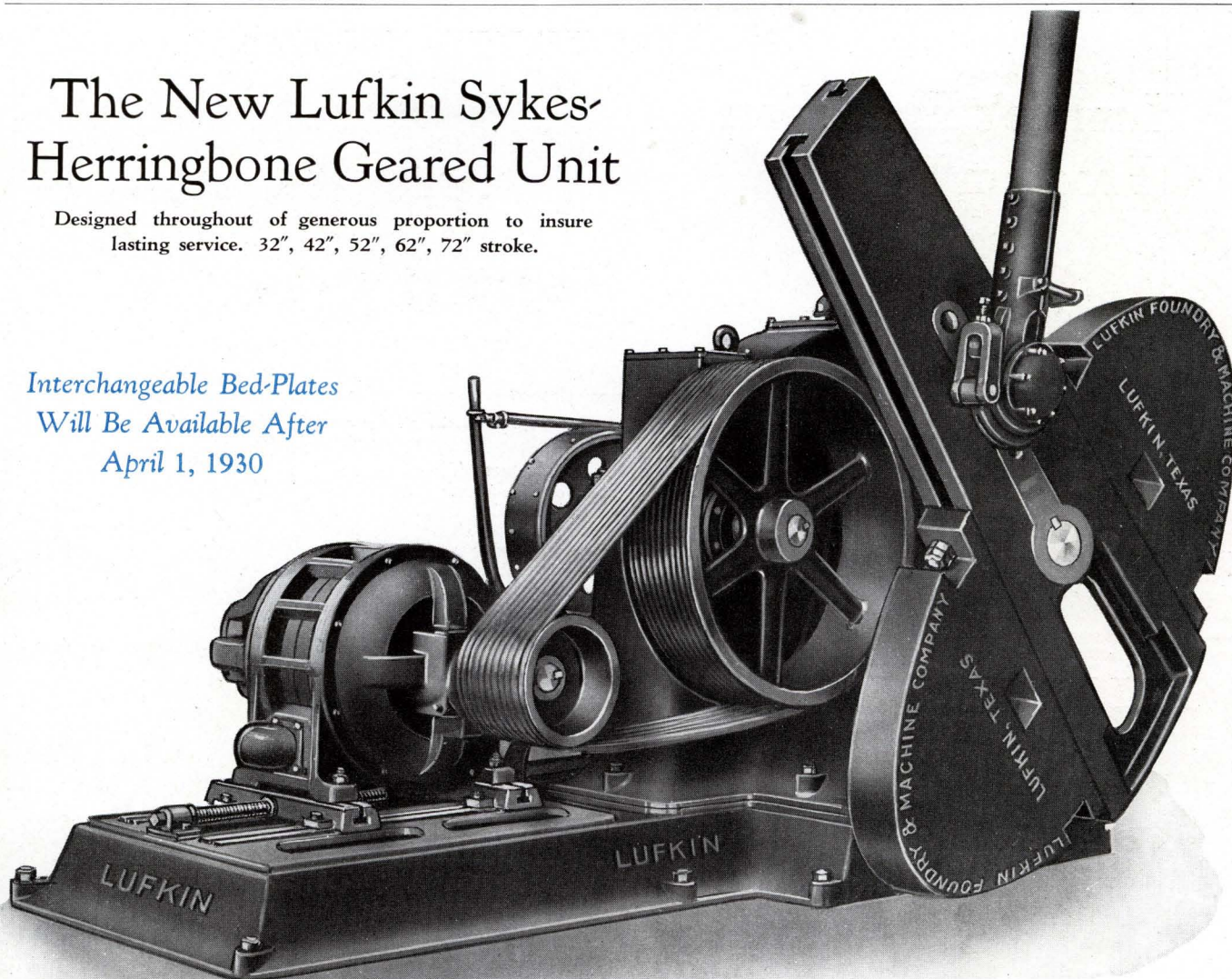
Because of its superior construction and extreme flexibility, the Dayton Cog Belt will be standard equipment on the New Lufkin Unit. Cut shows flexibility made possible only through the exclusive features of a Dayton Cog Belt.



The New Lufkin Sykes Herringbone Geared Unit

Designed throughout of generous proportion to insure lasting service. 32", 42", 52", 62", 72" stroke.

*Interchangeable Bed-Plates
Will Be Available After
April 1, 1930*



SPECIFICATIONS:

Two sizes now in production

61½" Heavy Duty Herringbone Unit

Shaft; gear shaft 6 7/16" in crank and bearings, 7 7/16" in gear.
Pinion Shaft 3 15/16", pinion 5.6" P.D. (pinion generated integral with shaft).

Gear 54" dia. 10" face, 136-T.

Pinion 5.6" P.D. 10" face, 14-T.

Ratio 9.7 to 1.

Weight 22,300 lbs.

51½" Standard Herringbone Unit

Shafts: Gear shaft 5 7/16" in crank and bearings, 6 7/16" in gear.

Pinion shaft 3 7/16" in bearings, pinion diameter 5" (pinion generated integral with shaft).

Gear 47" dia. 8" face, 141-T.

Pinion 5" P.D. 8" face, 15-T.

Ratio 9.4 to 1.

Weight 16,500 lbs.

GENERAL

BEARINGS:

Anti-Friction throughout. Gear bearings, bronze sleeve type, of generous proportion.

Pinion shaft, Hyatt Roller Bearings.

LUBRICATION:

Oil bath—simple and positive. Rotation of gears produces continuous flow of lubricants to bearings and gear teeth.

HOUSING:

Ruggedly constructed of cast iron, reinforced at points of maximum stress.

MATERIALS:

Pinions Chrome nickel steel, heat treated and generated integral with shaft.

GEAR:

High carbon, cast steel.

SHAFT:

Gear shaft forged alloy steel turned and ground.

PRIME MOVER ADAPTATION:

Designed for ideal compact adaptation to either oil field, or Star Delta constant speed motors, single or multi-cylinder gas engine drives with minimum expense for housing.

SPECIAL ADVANTAGES:

Sykes Herringbone Gears Provide:

- (A) Maximum contact surface for a given width of face.
- (B) Unbroken continuity of teeth engagement.
- (C) Equalized tooth wear.
- (D) Back lash practically impossible due to elimination of thrust.
- (E) Highest efficiency—lowest friction loss.
- (F) Minimum moving parts, lowest upkeep cost.

Sykes Herringbone gears are superior in strength, efficiency and silence of operation. The teeth are precision cut and ground in to match on special generators under our own supervision in our own plant.

The Lufkin Sykes Herringbone Geared Units for pumping and pulling, are designed and constructed in accordance with the most approved engineering practice, of generous proportion to insure lasting service.



Humble's Expansion Program Reaches Lufkin

Service Stations of Latest Design To Be Erected Here



Type of service stations erected in Lufkin by the Humble Oil & Refining Company.

Humble Oil & Refining Co., according to press dispatches, has carried out a service station and bulk station building and expansion program the past year which has involved the expenditure of over \$2,000,000 and which has developed a type of stations embodying beauty, permanence and utility not before realized on so large a scale by any one company. Between 180 and 200 stations of the new type have been built in Texas during the year by

presenting a very distinctive feature. The exterior is of stucco finish in special color with the base and columns of blue tile, and the eave lines of ornamental tile. The interior is of exposed glazed brick and the floor of hardened concrete, all making for ease in keeping clean and sanitary. The company's responsibility to the neighborhoods, however, does not end with a beautiful building but extends also to the premises, each station site being set off

with a standardized fence of simple yet neat and attractive type. Uncemented patches are grassed and suitable shrubbery and flowers are set out according to landscaping requirements.

Each service station is costing more than ordinarily is spent in such an institution but



A. M. Hepler, Division Superintendent, Humble Oil & Refining Company. Mr. Hepler was formerly in Oklahoma for the Humble Company.

Humble, which has meant an increase in volume of business of 50 per cent, and as the program has not been completed the coming year will witness the building of scores of additional stations of the same type by this company.

Built with a view toward attractiveness, the new Humble stations have done much to remove that neighborhood prejudice against "filling stations." Now, instead of its stations being dirty, greasy eyesores depreciating adjoining property as most stations in the past have done, Humble is building a type of station which will be a welcome addition to any location, assuring a work of beauty, neatness and cleanliness.

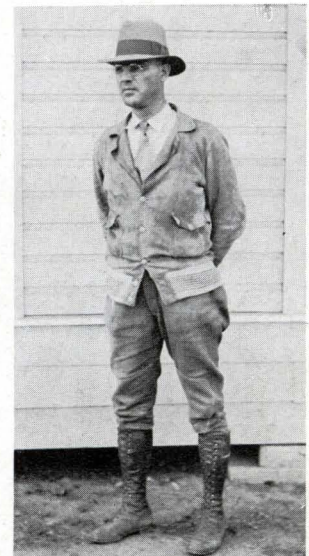
Although variable in some details to suit peculiarities of location sites, Humble's new stations are standardized in general style, construction, general layout and service facilities. In type, all are Moorish, the design of the station building proper the same, as shown in accompanying views, and naturally the color scheme of all is identical.

All the stations are roofed with copper,

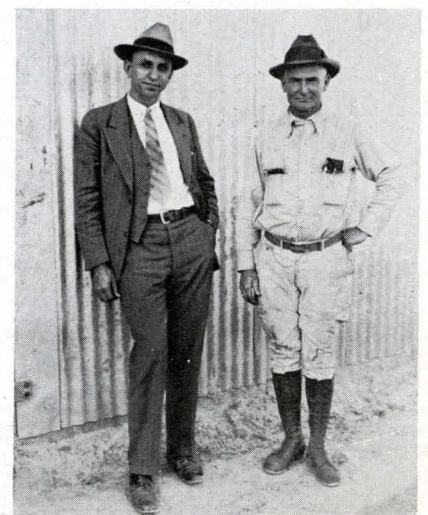
as each is an attractive asset to any locality and is being built of a permanent nature so it will be virtually as good in 10 or 20 years from now as it is today. Humble is feeling well repaid in its efforts to provide a station of this type.

These stations also are unique for large company owned stations as each is of the "one-stop" type, that is, each station provides a general service including not only the sale of gasolines and oils, but washing, greasing, tire repairs, new tires, battery service, accessories and such other incidentals as make for the convenience of the motorists.

Special wash rack and grease rack facilities which permit operators to keep the premises clean of waste oil and dirt at all times have been installed at all these stations. These include a unique drainage arrangement whereby all refuse can be washed into a common settling pit, from which the water can be drawn off into sewer connection, and the collected mud, old oil and grease cleaned out and destroyed without the ordinary objectionable features existing at many stations.



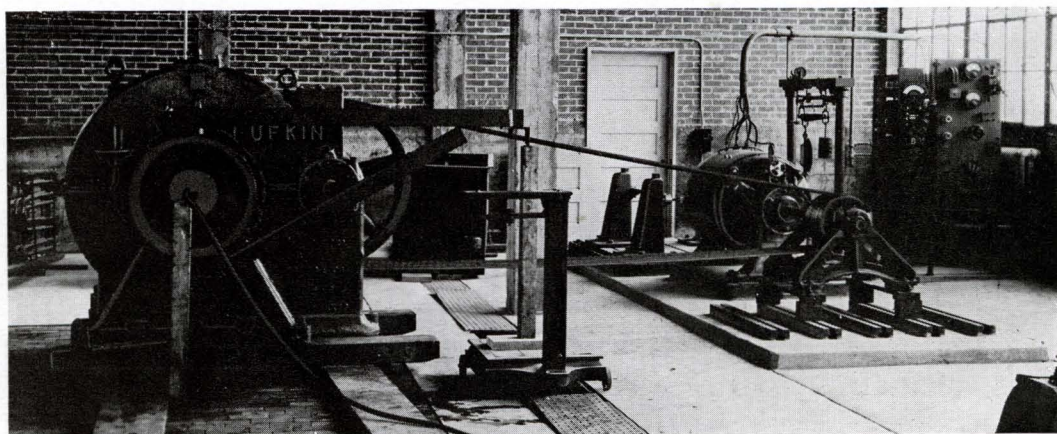
John R. Goddard, District Superintendent, Humble Oil & Refining Company, Seguin, Texas. Mr. Goddard held a similar position with the Humble Company in Oklahoma before coming to Seguin district.



B. L. Moore, left, veteran Electrical Engineer of the Humble Oil & Refining Company. Mr. Moore is very active in A. P. I. work and is considered an authority on electrical engineering. Left, Mr. P. Butand, Production Foreman, Humble Company, in the Humble field.



University Test Shows Lufkin Sykes-Herringbone Unit High In Efficiency



Lufkin Sykes-Herringbone Unit on the test block at A. & M. College.



Left to right: Bob Fenley, warehouseman, Roy G. Cullen, superintendent, I. O. Jordan, gauger. All with the South Texas Petroleum Company, at Humble, Texas.

Under the supervision of Mr. A. V. Brewer, Associate Professor of Mechanical Engineering, Agricultural & Mechanical College of Texas, College Station, Texas, and in co-operation with Lufkin Engineers an efficiency test of the new Lufkin Sykes-Herringbone gear was conducted, using the 6½" Heavy Duty size.

The chart, approved by Professor Brewer is submitted with this brief mention and tells the whole story. The input load to the Unit was measured by means of a General Electric

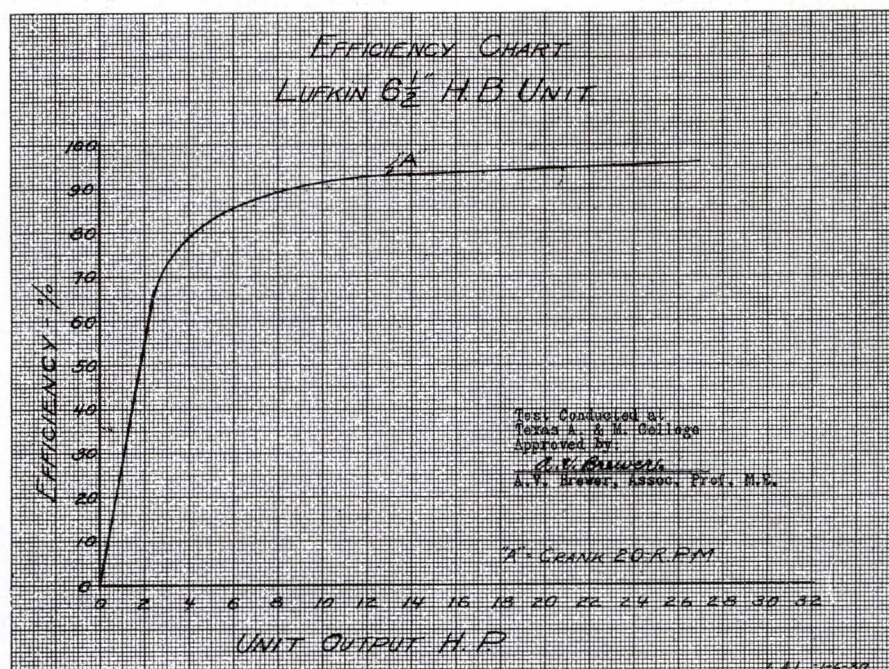
dynamometer and the output load by means of a Prony Brake on crank shaft of the Unit. The photograph at top shows the details of the testing set-up.

Curve "A" is the characteristic efficiency curve obtained from this test with the crank shaft running approximately 20 R.P.M. and the dynamometer motoring at approximately 610 R.P.M.

One will readily recognize, by analyzing the chart, the high efficiency of the new Lufkin Unit.



Texas Company officials, Darst Creek Pool: Left to right: F. L. Hugus, division superintendent, R. B. Leggett, assistant division superintendent.



Efficiency chart Lufkin 6½" Herringbone Unit, result of test conducted at A. & M. College of Texas, under supervision of A. V. Brewer, Associate Professor of Engineering.



New Buda Power Unit Gives Outstanding Performance

After four years of experience with Buda Engines driving Lufkin Units, the Buda Company has completely redesigned their line of oil field gas engines. The new engine incorporates in its design all those features which have proved to be desirable. The following description gives the high points of the new Buda Power Units, which are built to stand the hard use and abuse which the oil field gas engine is destined to receive.

A NUMBER of features added to the new Buda power units assure ruggedness and give ideal power for oil field service. The engine crankcase and upper half of bell housing bolts directly on to a ledge of the cast iron base. This gives support for the engine throughout its entire length and makes weaving or vibration between the engine and base an impossibility. The cast iron base serves as an oil pan and is fitted with large hand hole plates on each side providing accessibility for inspection or adjustment of the main and connecting rod bearings.

The heavy-duty Twin Disc clutch is a new development brought out to meet the severe conditions encountered in oil field service. It has an extra large friction surface for the transmission of power. Contact between the friction plates and the drive plate bolted to the flywheel is through gear teeth. This gives more contact thus reducing wear and eliminating the use of drive pins. The shaft is of large diameter and is carried on heavy bearings in the outer clutch housing and the flywheel. The clutch housing is of large diameter giving ample support. The clutch is so mounted that the upper half is bolted to the engine bell housing which is a part of the crankcase and the lower half directly on to the cast iron frame. This ties the rear end of the unit together so that weaving is impossible.

The radiator is supported on a cast bracket attached to the engine base and is provided with heavy bars at the front to prevent damage to the cores. Another feature of importance is the fact that the radiator core is made in sections. In case of damage to a section, it can be removed and replaced. The radiator has sufficient water capacity and frontal area to cool the engine under the most adverse conditions met in oil field work.

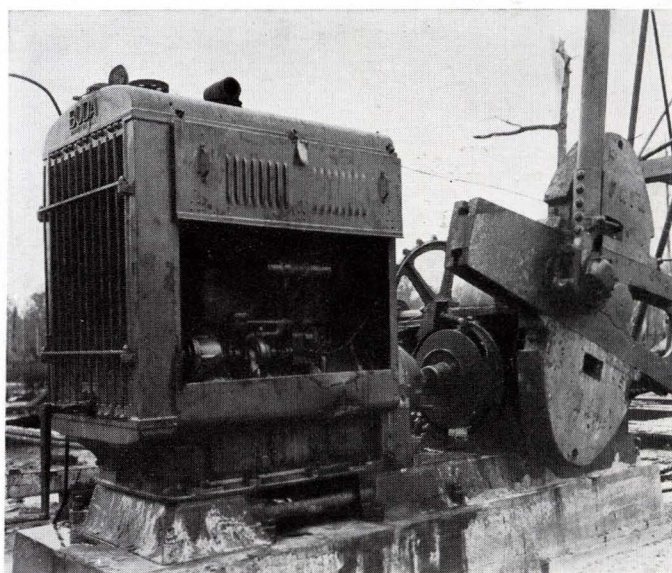
A large diameter fan is driven from the engine crankshaft by two "V" belts. The fan is braced solidly to the engine crankcase and is provided with an adjustment for tightening the belt.

The engines operate on either natural gas or gasoline fuel—the carburetor being arranged so that by a simple adjustment either fuel can be burned efficiently. The combustion chambers in the cylinder heads are designed especially for burning natural gas and because of these features smooth and flexible operation can be obtained on natural gas fuel.

The oiling system is kept clean by an efficient oil filter mounted on the engine crankcase. This gives the oil longer usability and protects the engine.

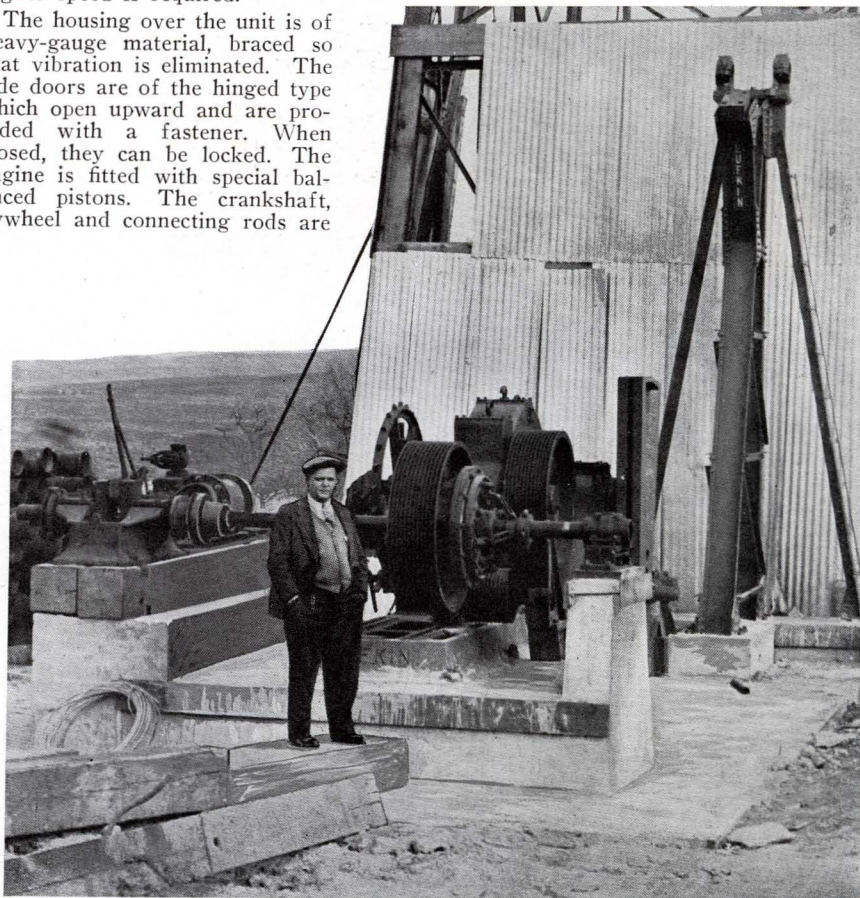
The fully enclosed built-in governor is provided with an adjustment for two ranges in speed—one for pumping and the other for pulling when a higher speed is required.

The housing over the unit is of heavy-gauge material, braced so that vibration is eliminated. The side doors are of the hinged type which open upward and are provided with a fastener. When closed, they can be locked. The engine is fitted with special balanced pistons. The crankshaft, flywheel and connecting rods are



New Buda Power Unit J.H.-4 and Lufkin Standard Worm Gear Unit, Trout Pitman and Lufkin No. 522 Rod and Tubing Hoist. Simms Oil Company Effie Johnson No. 4, El Dorado district. Total depth 1988 feet, 2" tubing, 3/8" rods. Total production 115 bbls., well pumping at 1975 feet in third hole, 28" stroke, 22 strokes per minute.

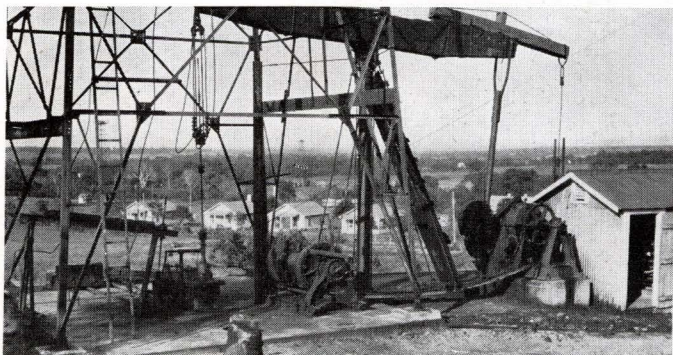
carefully balanced. These operations insure smooth running of the engine and minimize vibration.



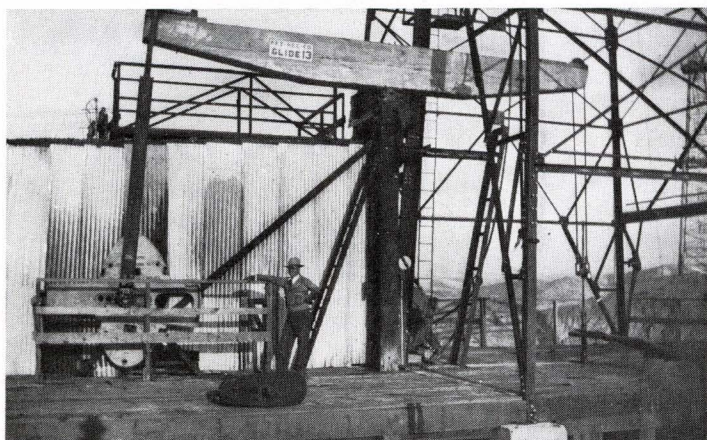
Lufkin Herringbone Unit connected to steam engine Humble Oil & Refining Company, Pampa, Texas. Mr. H. Busby, District Superintendent for the Humble Company in foreground, designed and rigged up this drive. After well is drilled in a gas engine of the single cylinder type will do the pumping.



SNAP SHOTS



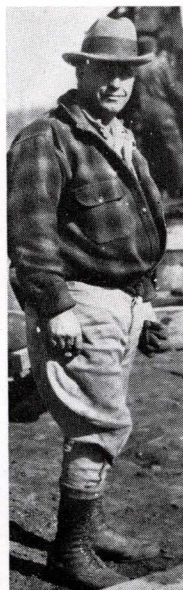
Three years without rods out of hole, is the record of Wright No. 1, shown above, of the Shaffer Oil & Refining Company, Drumright District, Oklahoma. The well is 3800 feet deep and at present is producing 100 barrels oil daily. Initial production three years ago 350 barrels. Lufkin equipment includes Standard (5½") Worm Geared Unit with electric motor drive.



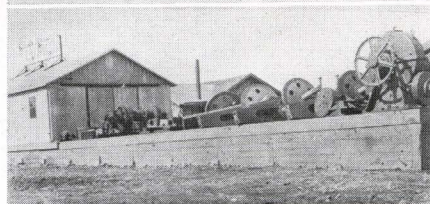
Trout standard counter balance crank on Standard Rig of the Petroleum Securities Company, Glyde 13, Mount Poso district. Mr. B. R. Bradford, Chief Electrician for the Bakersfield District is the gentleman in the picture.



Men playing prominent part in development at Seguin field: Left to right; Pat Garrett, Electrical Contractor, H. L. White, Production Clerk, J. M. Warefield, Production Foreman, E. L. Hugus, Purchasing Agent, V. V. Hunt, Warehouseman. All employees the Texas Company except Pat Garrett.



Fred Yeager, Representative, Lufkin Foundry & Machine Company, on the Pacific Coast. Mr. Yeager was formerly one of the head rig builders for the Standard Oil Company, and was at one time connected with the Associated Oil Company. He makes headquarters at Downey, California.



Two views of Lufkin's Seminole, Oklahoma, warehouse. Upper is front view; lower is view of loading platform showing part of heavy stock carried in Seminole. R. W. Noble is in charge.



Humble officials and employees at Darst Creek. Bottom row: left to right; W. T. Knight, Electric Foreman, John C. Faunt, Chief Clerk, E. W. Daniels, Warehouseman, C. H. Wilson, Timekeeper, Chas. Barclay, Time Clerk, John R. Goddard, District Superintendent, W. E. Cook, Inventory Department, L. C. Peters, Production Superintendent. Top row: left to right; B. J. Ernst, Night Watchman, J. C. Woods, Warehouse Clerk, C. S. Croyle, Carpenter Foreman, E. L. Johnson, Transportation Foreman, J. E. Barwick, Tool Pusher, G. R. Farmer, Warehouse Clerk, G. C. Nicklow, Water and Fuel Superintendent.

LUFKIN SYKES-HER

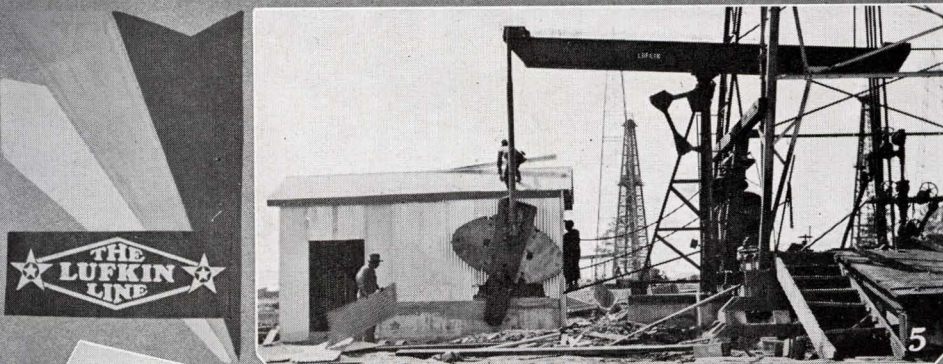
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Humble Company, William No. 4, Humble Field.



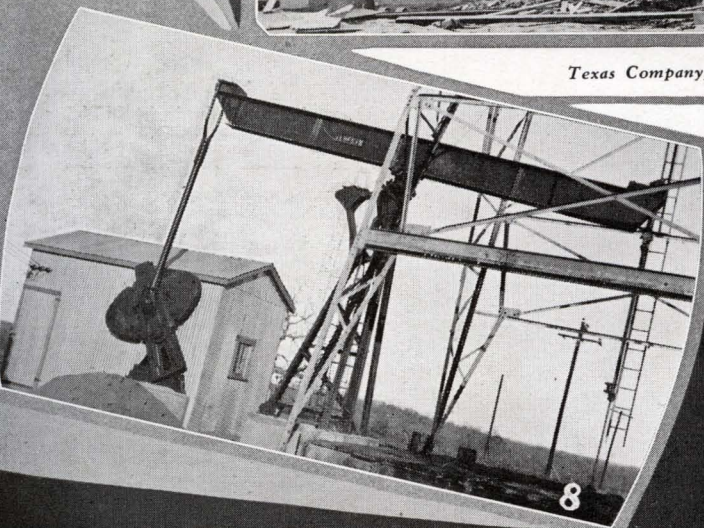
South Texas Petroleum Company, No. 11, Humble Field



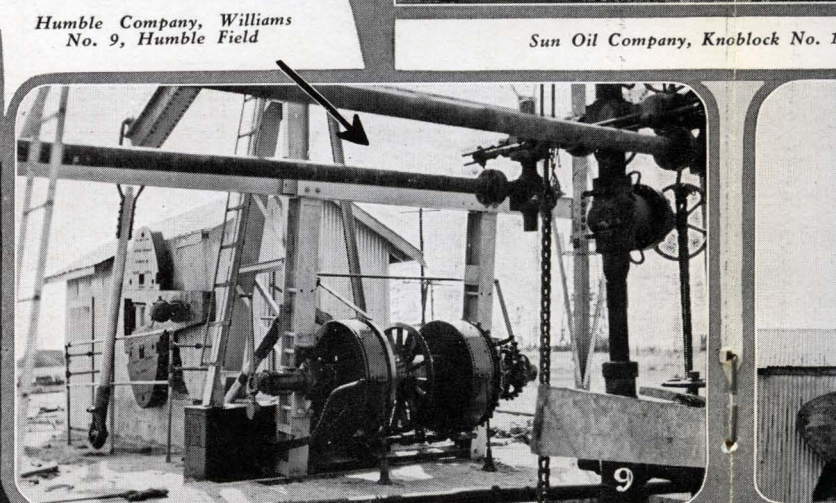
Texas Company, Dun No. 2, Humble Field



Sun Oil Company, Knoblock No. 1



Texas Company, Lemmie Anderson No. 4, Darst Creek



Humble Company, Williams No. 9, Humble Field

1. Humble Company, William No. 4 Humble Field, depth 5000 feet, well flowing 100 barrels daily. Lufkin 6 1/2" Herringbone Unit, Trout Pitman, Lufkin No. 1 Post and No. 522 Hoist.
2. South Texas Petroleum Company, No. 11 Humble Field, depth 5300 feet, 2 1/2" tubing, 3/4" rods, production 200 barrels. Complete Lufkin installation consisting of 6 1/2" Herringbone Unit, Samson Post, Beam, Pitman and No. 52 Hoist.

3. Simms Company, Mrs. Johnnie Manford No. 1, Darst Creek, depth 2580 feet, flowing 550 barrels. Lufkin completely equipped, 5 1/2" Herringbone Unit, Trout Pitman, No. 1 Samson Post and I Beam type walking beam and No. 522 Hoist.
4. Humble Company, D. D. Baker No. 3, Darst Creek, depth 2635 feet, 2" tubing, 3/4" rods,

production 950 barrels. Lufkin 5 1/2" Herringbone Unit and auxiliary equipment.
5. Texas Company, Dun No. 2 Humble Field, depth 5300 feet, production 500 barrels, Lufkin completely equipped including 6 1/2" Herringbone Unit, No. 522 Hoist, Trout Pitman Post and Beam.
6. Sun Oil Company, Knoblock No. 1, Darst Creek, depth 2650 feet, 2 1/2" tubing, 3/4" rods, production 1000 barrels. Complete Lufkin

equipment No. 522
7. Humble Company, Darst Creek, rods, production 100 barrels, Lufkin Unit, and No. 522 Hoist.
8. Texas Company, Darst Creek, rods, production 100 barrels, Lufkin Unit, and No. 522 Hoist.

Please Note: These pictures taken during intensive activity. Shortly they will be cleaned up, presenting

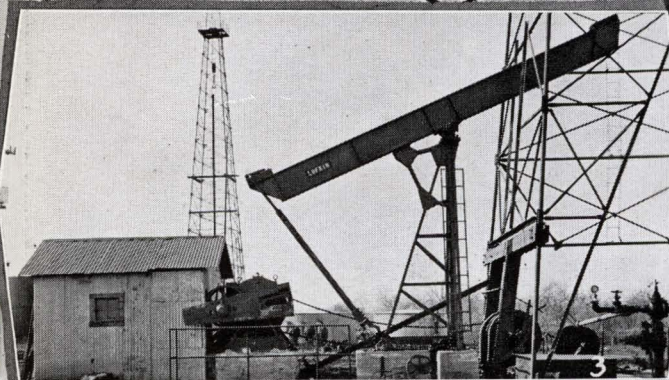
Instant Acceptance Has Been The Reception

HERRINGBONE UNITS

in the Field



2



3

Simms Company, Mrs. Johnnie Manford No. 1, Darst Creek



4

Humble Company, D. D. Baker No. 3, Darst Creek



6

Oil Company, Knoblock No. 1, Darst Creek

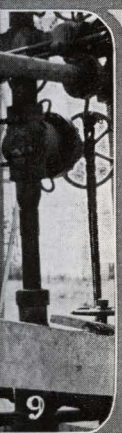


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Humble Company, Sallie Wilson No. 2, Darst Creek



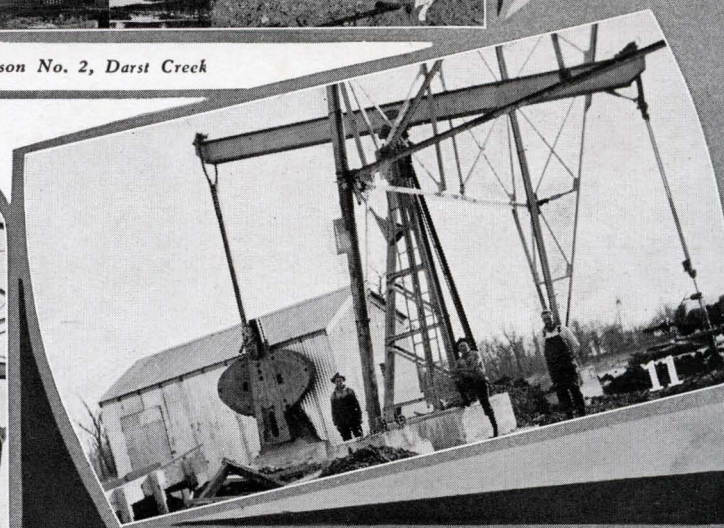
United North and South, Roamel No. 1, Darst Creek



9



10



11

United North and South, Thos. Dix No. 2, Darst Creek

1/2" Herring-
bone Unit,
Humble Field,
Lufkin
Post and Beam.
No. 1, Darst
Creek, 3/4" rods,
complete Lufkin

equipment including 5 1/2" Herringbone Unit,
No. 522 Hoist, Pitman, Beam and Post.
7. Humble Company, Sallie Wilson No. 2,
Darst Creek, depth 2650 feet, 2 1/2" tubing, 3/4"
rods, production 1300 barrels, 5 1/2" Herringbone
Unit, and auxiliary equipment.
8. Texas Company, Lemmie Anderson No. 4,
Darst Creek, depth 2645 feet, 2 1/2" tubing, 3/4"
rods, production 800 barrels, equipped with 5 1/2"

Herringbone Unit, No. 1 Samson Post, I Beam
type walking Beam, Trout Pitman.
9. Humble Company, Williams No. 9, Humble
Field, depth 4892 feet, flowing 4500 barrels,
6 1/2" Herringbone Unit, Trout Pitman and note
Lufkin No. 522 Hoist with steel Jack Posts.
10. United North and South, Roamel No. 1,
Darst Creek, depth 2490 feet, 2 1/2" tubing, 3/4"
rods, production 1350 barrels. Equipment in-

cludes 6 1/2" Herringbone Unit, Trout Pitman and
Samson Post assembly. Among the men in the
picture are J. H. Bergman, gauger and N. T.
McCarley, foreman.
11. United North and South, Thos. Dix No. 2,
Darst Creek, depth 2530 feet, 3" tubing, 3/4"
rods, production 2250 barrels. Lufkin equip-
ment includes 6 1/2" Herringbone Unit, Trout
Pitman and Samson Post assembly.

will be cleaned up, presenting a neat, clean installation. This is always possible with a Lufkin Unit.

Reception of The Lufkin Sykes-Herringbone Unit



Compact & Attractive ADAPTATION OF Prime Mover FEATURE OF THE NEW Lufkin Sykes-Herring- bone Unit

A FEATURE for which Lufkin Units have always been noted, is the ease with which the prime mover is adapted. Particularly is this true with the new Herringbone Unit. Designed with the idea of the almost entire employment of "V" belt drives, the Herringbone Unit is found to be very flexible and readily adapted to the use of any type of prime mover. Already both oil field and Star Delta constant speed electric motors, Multi-cylinder gas engines, single cylinder gas engines and steam engine installations have been made.

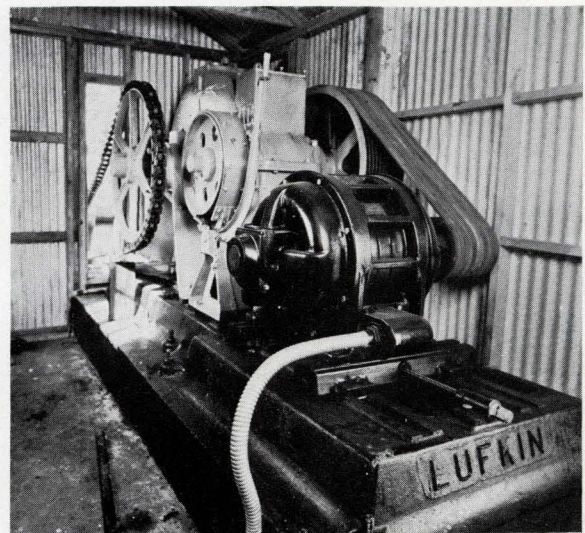
Figure No. 1 shows an ideal electric motor installation. Note Lufkin Uni-

versal slide rails. Fig. No. 2 shows typical Buda or Multi-cylinder gas engine hook-up. Fig. No. 3 is a left hand drive for electric motor.

This type of drive is arranged for the use of constant speed motor installations where pumping only is desired and permits the use of larger sheaves.

A unique feature of the new Lufkin-Sykes Herringbone gear is found in the interchangeability of bed plates of the

5½" and 6½". This is especially desirable when, after the installation of a 5½" Unit it is found advisable to use a 6½". The 5½" can then be used on a lighter well with the purchase of a bed plate. An extension base accommodates the use of Buda engine and is adjustable by means of suitable slide rails, same as electric motor, tightener being unnecessary. Note: Interchangeable bed plates will not be available until after April, 1930.



Inside motor house. There is ample room to take off or put on belts on V drive not evident in picture.

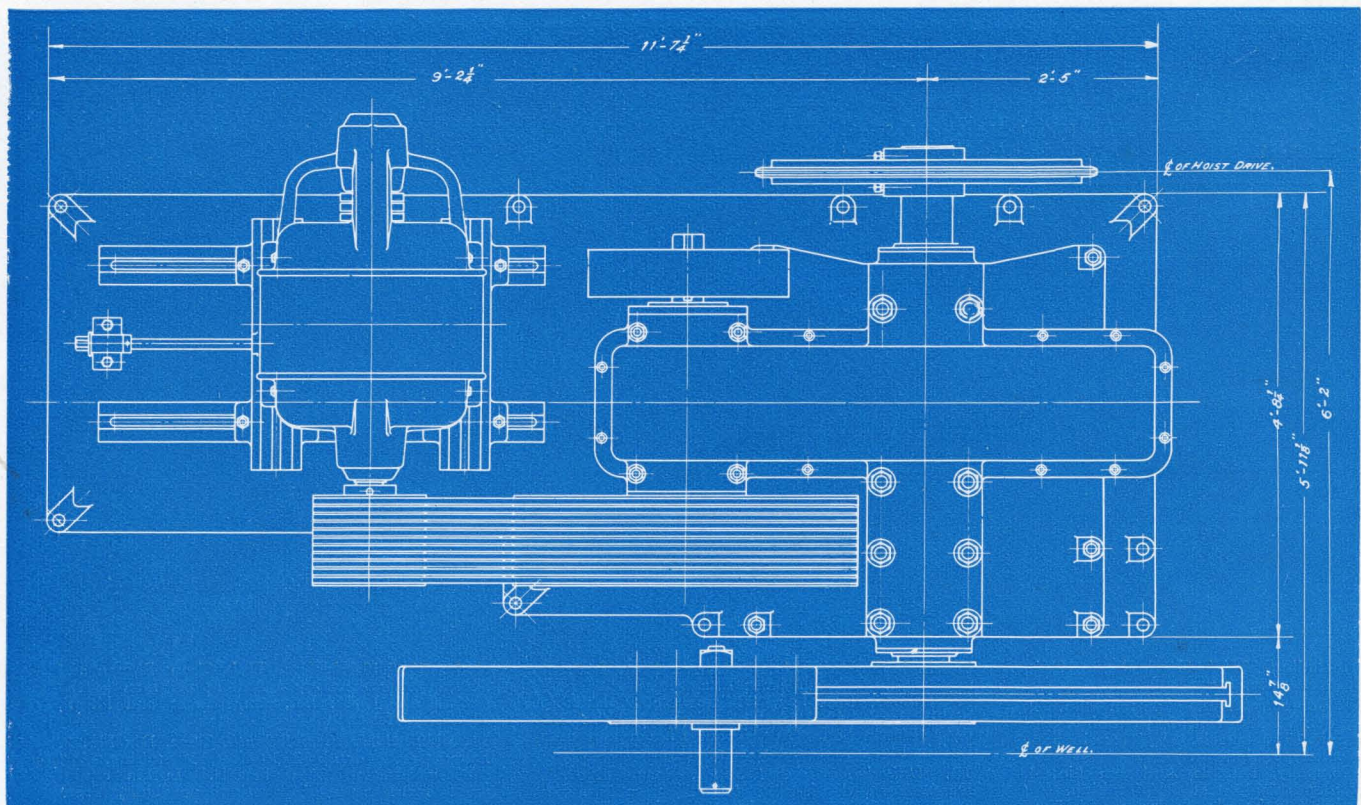


Fig. 1. An ideal electric motor installation. Note Lufkin Universal slide rails.

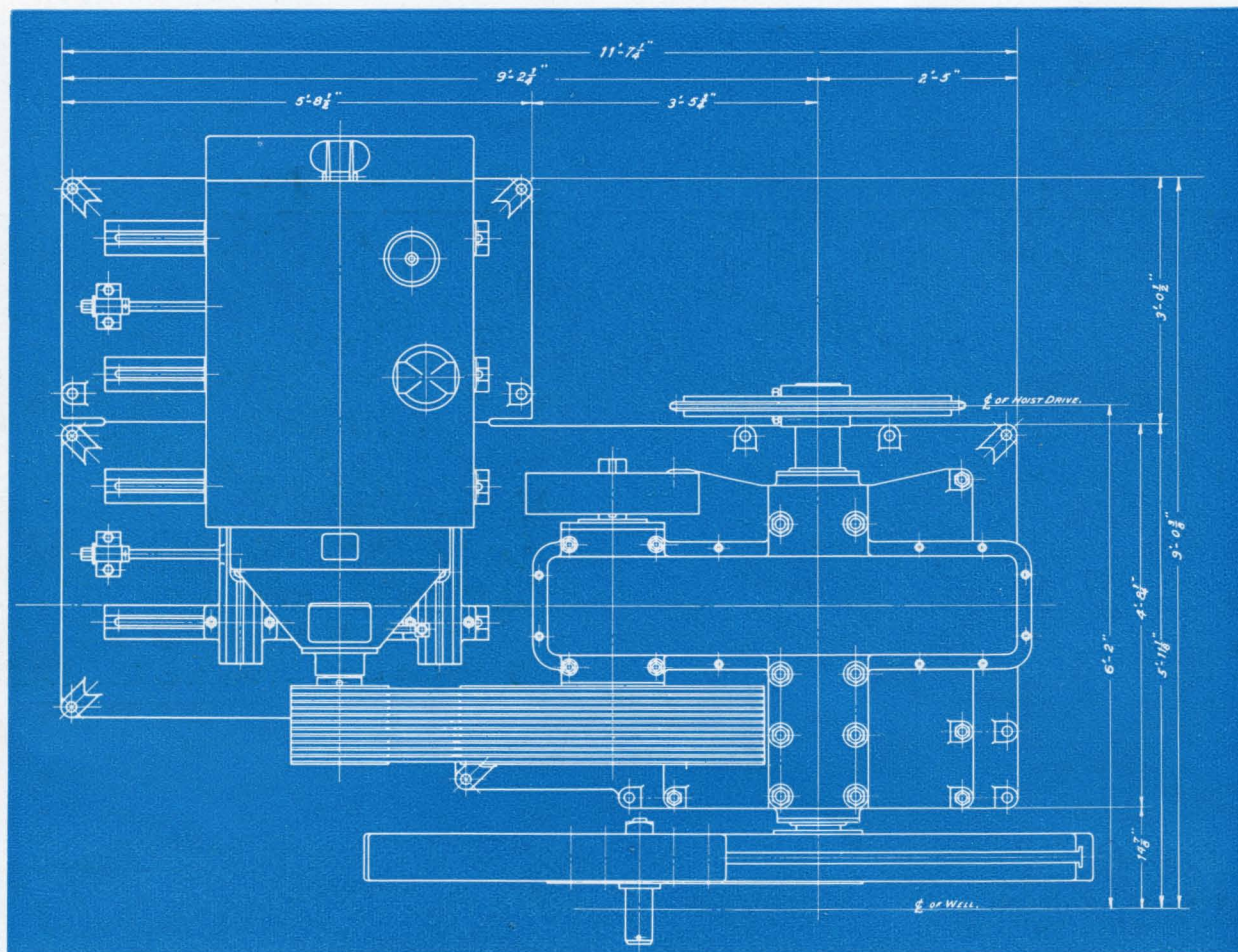


Fig. 2. Typical Buda engine installation. Merely the addition of an extension base to the regular standard base accommodates the Buda engine. Slide rails eliminate tightner.

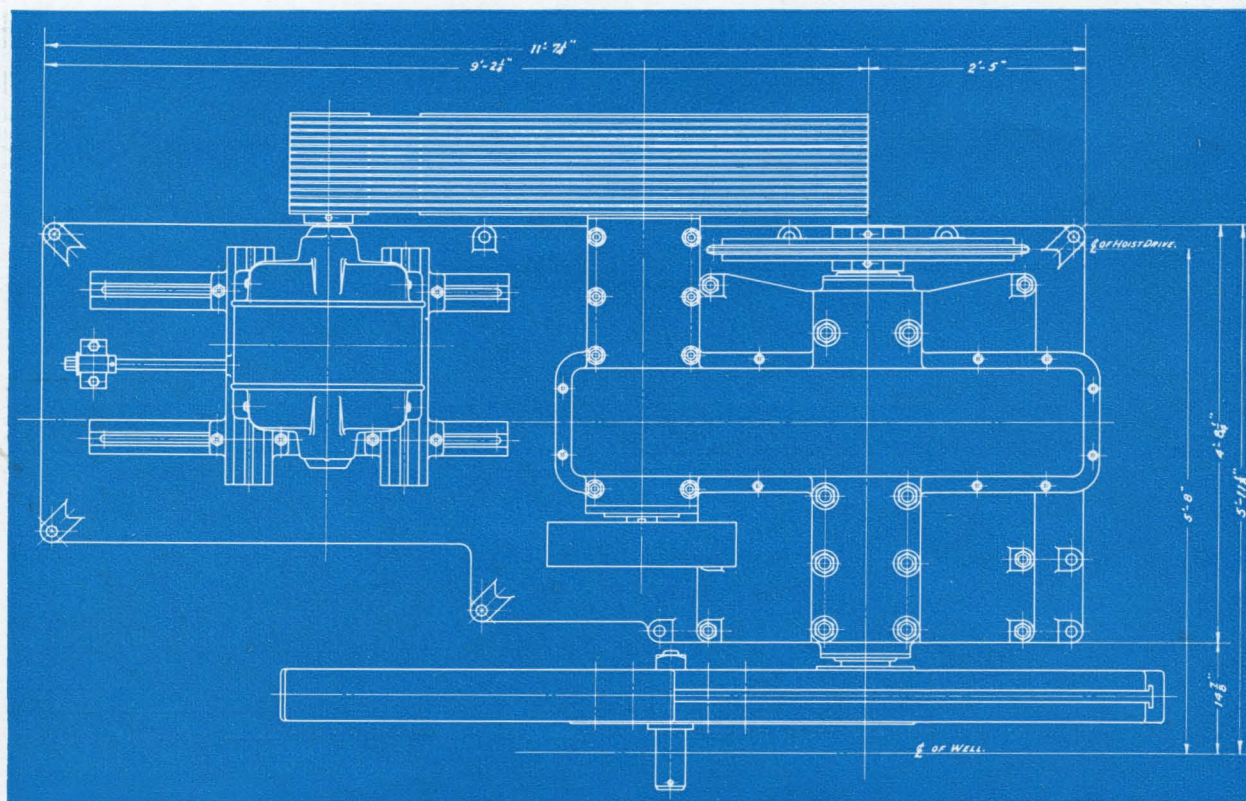
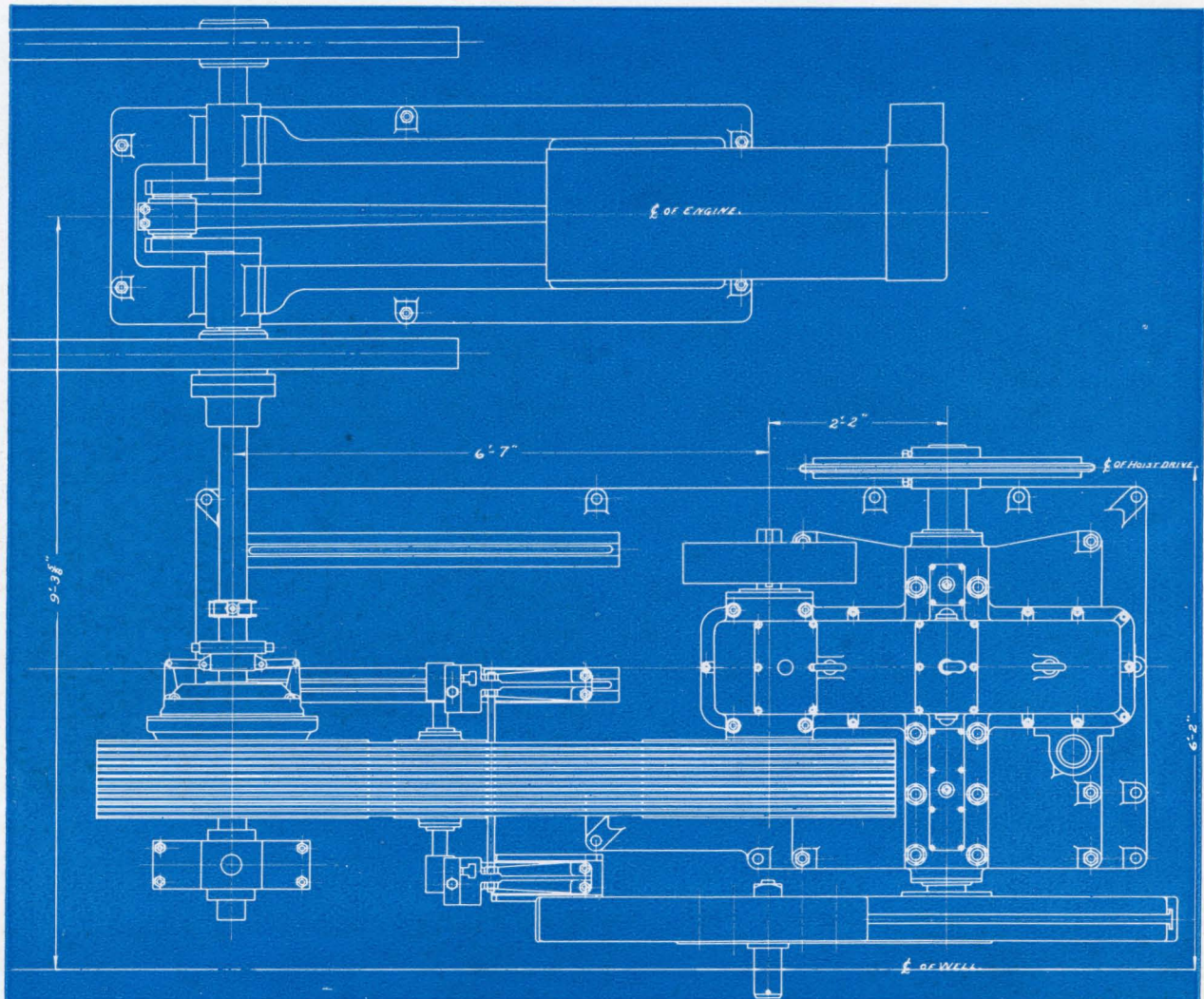
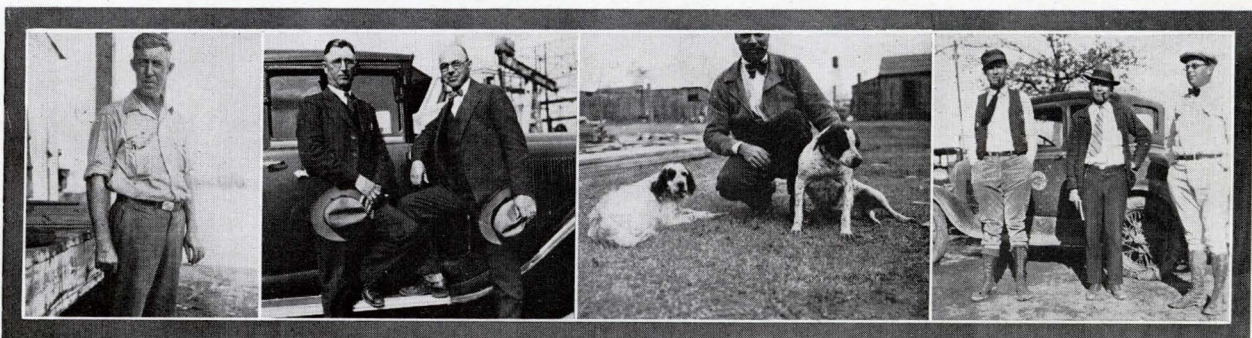


Fig. 3. Constant Speed Squirrel Cage Motor adaption, left hand drive. This drive especially for constant speed motor where pulling is done by tractor. Left hand drive merely to permit use of larger sheaves.



The new Herringbone Unit with single cylinder engine drive. A number of such installations have been made. Note compactness and neatness of installation.



With our friends in Oklahoma. No. 1, Ed Bartley, District Foreman, Shaffer Oil & Refining Company, Ripley, Oklahoma. No. 2, O. L. Stevenson, District Superintendent, Tonkawa, Henry Hogson, Construction Superintendent, Tulsa, both with Gypsy Oil Company. Bob Badon, Chief Electrician, Shaffer Oil & Refining with two prize bird dogs. One on left owned by Badon, one on right to Joe Lugan, Assistant General Superintendent. No. 4, left to right, P. L. McMichach, Production Clerk, Chas. McGrory, Warehouseman, W. C. Young, Production Foreman, all with Louisiana Oil & Refining Company, Allen, Oklahoma.



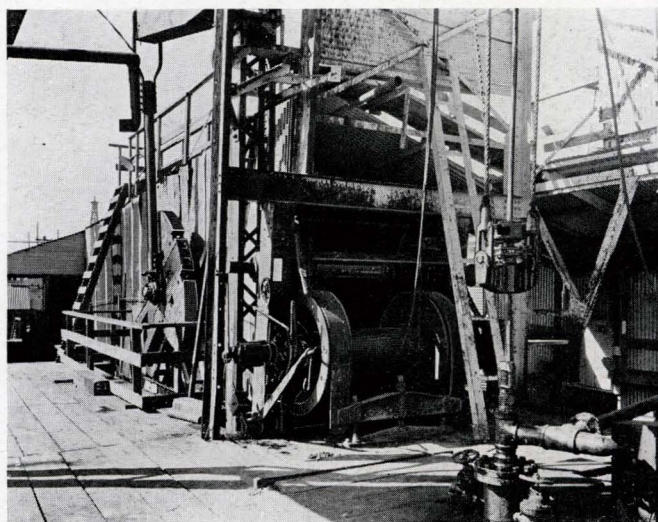
Lufkin Hoists

STANDARD EQUIPMENT

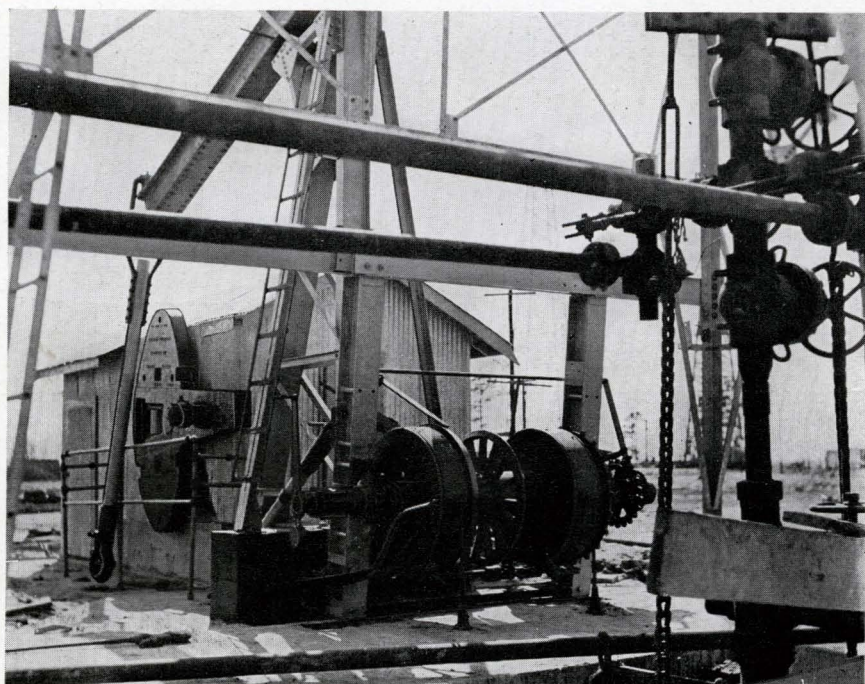
In All Fields

*Designed in Sizes to Suit
All Well Conditions*

AFTER six years experience in all the major domestic and the principal foreign fields, Lufkin has Standardized on a line of Hoists that by actual tests in the field have been found to meet all conditions. Lufkin Hoists are now operating in all fields from small shallow produc-



A. T. Jergins Syndicate well, Long Beach, California, Lufkin No. 141 Hoist. Photo also shows combination of Lufkin Trout Counterbalance Crank and Pitman on this California belted rig.



Lufkin No. 522 Hoist, the Humble Company, Humble, Texas, field, depth 4892 feet. In the rear can be seen Lufkin 6½" Herringbone Unit, Trout Pitman and Lufkin Samson Post. Note steel jack posts for Hoist.

tion to one well in California said to be the deepest producer in that State.

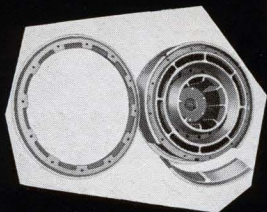
The Trout expansion brake drum is a feature of each Hoist. All Lufkin Hoists are of the loose drum type. Positive lubrication is made possible by the use of Alemite system. Hyatt Roller Bearings are used in the drum and a double ball thrust bearing has been provided for.

Clutch is of asbestos graphite block construction. Brake linings are regular Johns - Manville Asbestos folded type. All line shafts have extension right end sprocket to drive rotary countershaft.

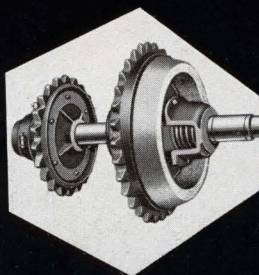
Designed in a number of sizes, this line of Hoists has met with instant acceptance.

LUFKIN IMPROVED

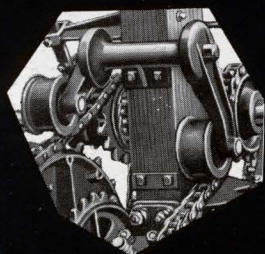
Leaders in design and efficiency



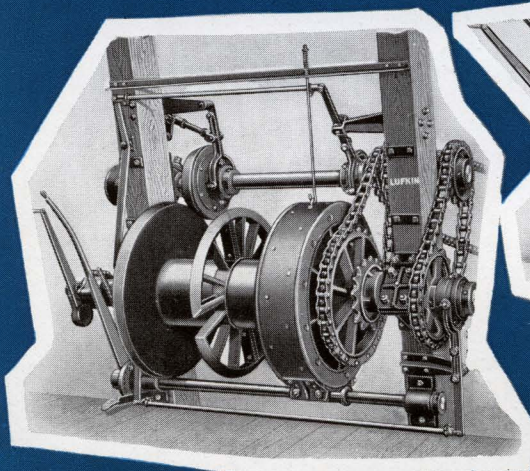
**TROUT'S EXPANSION
BRAKE DRUM**



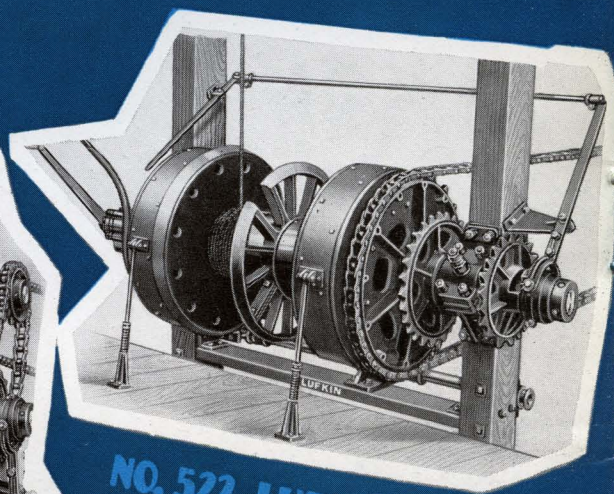
**SHAFT, CLUTCH &
SPRING RELEASE**



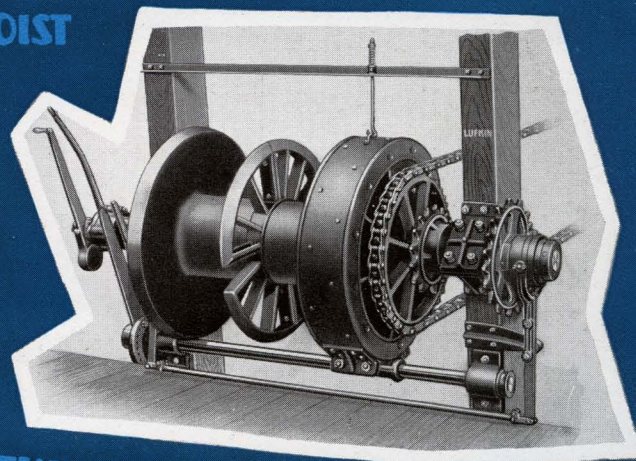
CHAIN TIGHTENER



NO. 2 LUFKIN HOIST



NO. 522 LUFKIN HOIST



NO. 6 LUFKIN HOIST

Lufkin Improved Rod and Tubing Hoists

SPECIFICATIONS

NO. 2 LUFKIN HOIST

Line shaft 4", drum shaft 4", drum diameter 16", drum length 35", expansion brake drum 42" diameter, 8" face, roller bearings in drum. Line capacity 3550 of 1" or 6000 feet of $\frac{3}{4}$ " wire line. Weight 7400 pounds.

NO. 522 LUFKIN HOIST

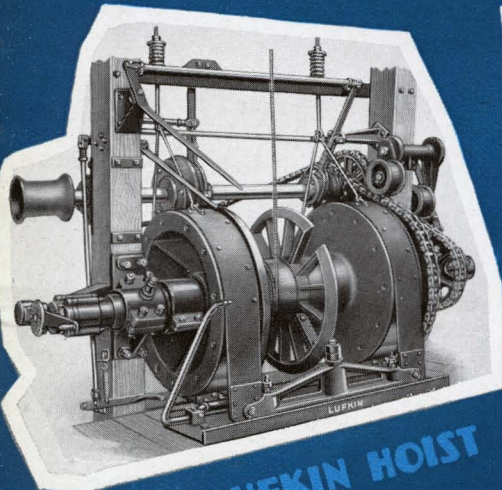
Line shaft 5", drum 16" diameter, 35 $\frac{1}{2}$ " long, expansion brake drums (double) 42" diameter x 8" face, full roller and ball thrust bearings in drum. Line capacity 3600 ft. 1" or 6400 ft. $\frac{3}{4}$ " wire line. Weight 12,000 pounds.

NO. 6 LUFKIN HOIST

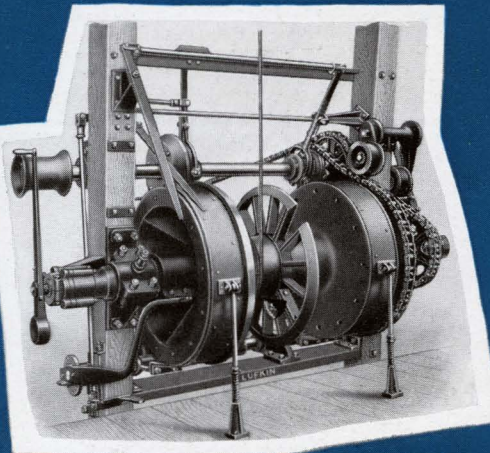
Drum shaft 4", drum diameter 16", length 35", single expansion brake drum 42" diameter x 8" face, with full roller bearings in drum, line capacity 3550 ft. of 1", 6000 ft. of $\frac{3}{4}$ ", weight 6200 pounds.

IMPROVED HOISTS

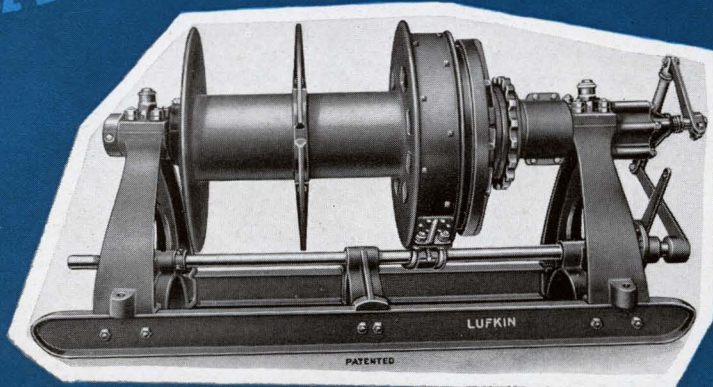
Especially designed for geared units
and standard rigs



NO. 62 LUFKIN HOIST



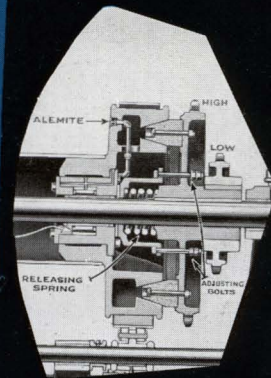
NO. 52 LUFKIN HOIST



NO. 5 LUFKIN BAILER



BALL BEARING
THRUST



LOOSE DRUM

FEATURES COMMON TO ALL LUFKIN IMPROVED HOISTS: Hyatt Roller Bearings in drum, double thrust bearings, Positive oiling system with large oil capacity, expansion brake drums, drum loose on shaft, Alemite Lubrication, J. M. Asbestos Brake Lining, Asbestos friction block clutches, all line shafts have extension right end sprocket to drive rotary counter shaft, right or left hand hoists can be furnished, fast, rugged, efficient.

SPECIFICATIONS

LUFKIN NO. 62 LINE SHAFT HOIST

The No. 62 Hoist is the same in specifications as the number 52 except No. 62 has brake equalizer. This is also true of the number 622 as compared with the number 522.

NO. 141 SPECIAL CALIFORNIA TYPE HOIST

(Not illustrated but designed after fashion of No. 62)

Line shaft 4-15/16", Drum shaft 4-15/16", Expansion drum 48" diameter, 8" face, Drum 16" diameter, 35 1/2" long. Floor anchored equalizer, Line capacity 4340 ft. of 1", 6960 ft. of 7/8", 9500 ft. of 3/4" wire line.

LUFKIN NO. 52 LINE SHAFT HOIST

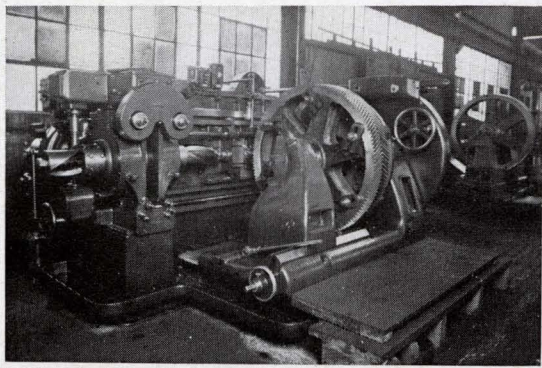
Line shaft 4", drum shaft 5", drum diameter 16", drum length 35 1/2" double expansion drums 42" diameter x 8" face, full Hyatt roller and ball bearing thrust in drum. Line capacity 3600 ft. of 1" or 6400 ft. of 3/4" wire line. Weight 12,000 pounds.

NO. 5 LUFKIN BAILER

The Lufkin No. 5 Bailer is a self contained unit with drum keyed to shaft with sprocket clutch loose. Drum 12" diameter with 36" flanges and will hold 6,000 ft. of 9/16" wire line. Shaft 3-15/16" diameter.

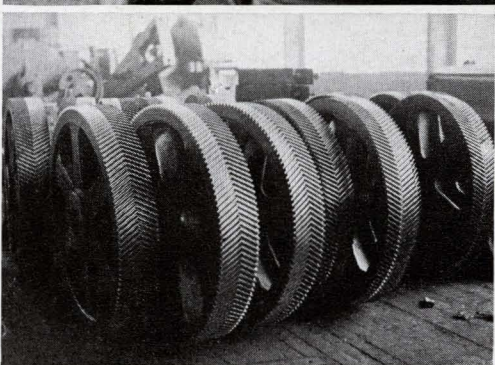
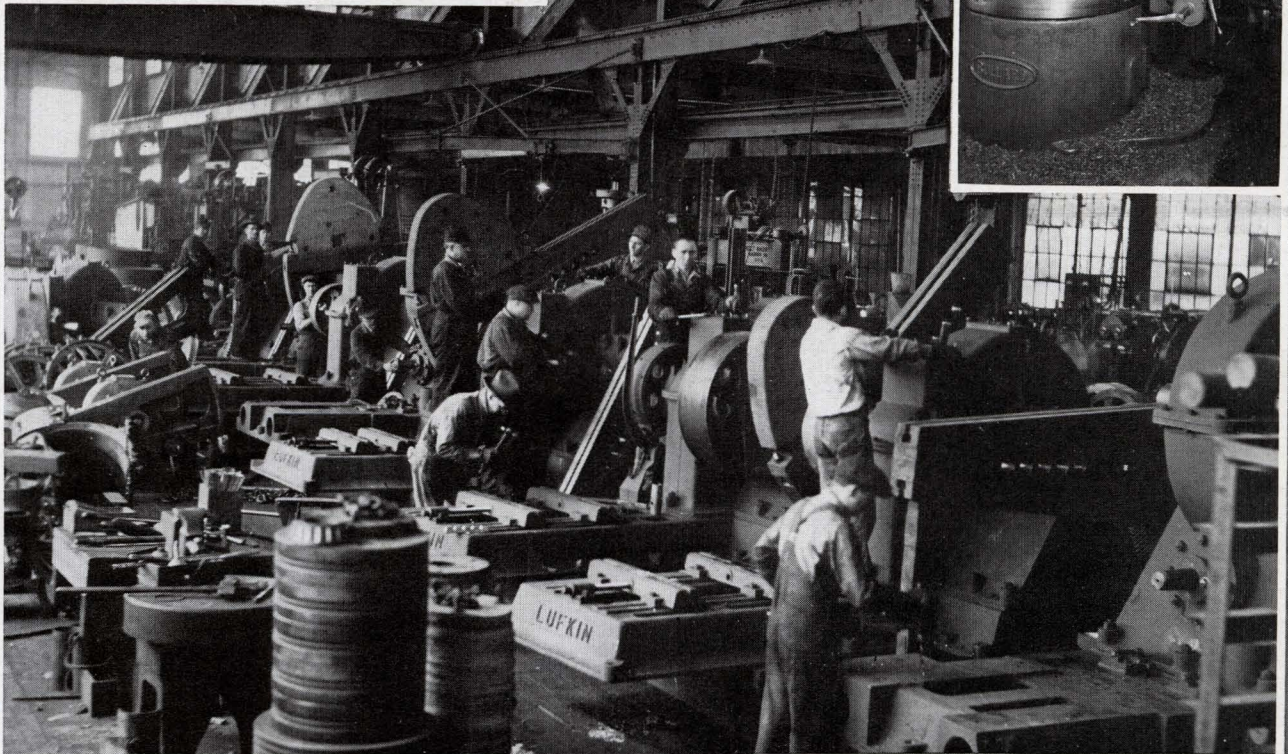
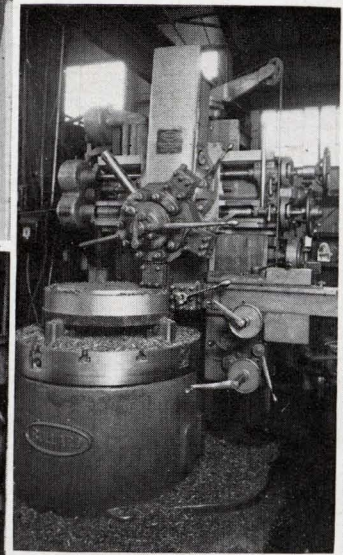


Machinery of Latest Design Used in Manufacture of Lufkin Equipment



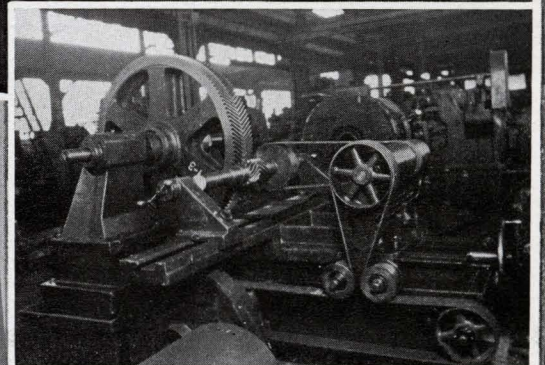
Left: Sykes-Herringbone Gear Generator. This machine has been installed in the Lufkin plant for generating the gears used in the new Lufkin Unit only.

Right: Bullard Turret Boring mill. This machine faces and bores fly wheels, "V" belt sheaves, etc., without rechucking. This is accomplished by means of the turret head.



Left: Sykes Tooth Herringbone Gear, for the new Lufkin Unit.

Right: "Lapping in" machine used for lapping in and matching to insure absolute precision of the Sykes tooth gear and pinion of the new Lufkin Unit. Gears and pinions are cut to within .003" and then lapped in with ground glass and oil.



Lufkin Units come through the shop in regular production style. The most up-to-date machines are used and modern production methods are

CENTER: ON THE PRODUCTION LINE AT LUFKIN

employed in all departments. A constant rigid inspection department is maintained which keeps Lufkin products up to a standard otherwise impossible to attain.



The LUFKIN LINE

Published to promote Friendship and Goodwill with its customers and friends and to advance the interest of its products by the Lufkin Foundry and Machine Co.

A. E. CUDLIPP, *Editor*

Vol. 10

MARCH-APRIL, 1930

No. 2

COURTESY

Courtesy is a consideration no longer optional in any field of endeavor. It is now a consideration which is expected and is demanded by all who transact business one with another. In recent years, courtesy has become a fundamental business principle which must be recognized and observed by every business and individual, large or small, rich or poor, which would succeed. It is in evidence in every hotel, restaurant, theatre, church, club, office and well governed places of business that we enter. People of all classes expect it, demand it, and are entitled to it. Which of us continue to patronize any place, individual or establishment where it is not practiced?

True, it is difficult to be courteous under all conditions. Some men feel that there is a limit to the insults one can take and maintain dignity, yet, the position of the truly courteous man is—we should so practice and teach it—that courtesy, regardless of circumstances, always pays; that lack of courtesy in others is no excuse for discourtesy on our part; that we cannot be insulted unless we accept an insult, and that the acceptance of an insult, is degrading. A gentleman will not insult us, and no one else can. Because a pig grunts at us is no reason why we should grunt back.

How courtesy reacts for the benefit of those who practice it, is illustrated by the story of a man who, riding at night in the automobile of a friend, noted that drivers of cars moving in opposite direction invariably dimmed their lights, finally said to his friend, "What courteous drivers you are meeting tonight. Everyone whom we have met has dimmed his lights. I have never had that happen to me. People go right by me with their headlights glaring me blind. I wonder what is the matter tonight?"

"I always use my dimmers first," quietly remarked my friend.



Department of Commerce reports show that motorists of the United States alone of all the world pay as little as, or even less than, 20 cents a gallon for gasoline. Even such near neighbors as Canada and Mexico pay 23 to 36 cents, while in such populous countries as Great Britain, France, Italy, Germany and others the retail price runs as high as 40 cents. Bolivian motorists pay 65 cents a gallon and the world average, outside the United States, is around 35 cents.

The figures indicate beyond question this country owes its bargain to its national petroleum resources and to the industry that has developed them. The American petroleum industry's ingenuity, enterprise and willingness to meet the buying public more than half way are directly responsible.

Here's the Jokes

*Frankly second hand—Age
not guaranteed.*



"Low bridge," shouted the bus conductor. "Everybody keep his seat and face to the front."

A gay little flapper up forward turned around, smiled sweetly, and said, "You know that can't be done."

Caddy (to new English member of the golf club):
"Do you like an 'igh tee, sir?"

"What's it to you if I like an 'igh tea or a dinner? You put the ball on the 'ump, and I'll 'it it."

After terrific struggles, the freshman finally finished his examination paper, and then, at the end, wrote:

"Dear Professor: If you sell any of my answers to the funny papers, I expect you to split fifty-fifty with me."

"How much does it cost to run your car, Tom?"

"I can't say how much it costs to run it, but it has cost me over \$50 to leave it standing still."

Why did you join the Salvation Army?

So I could play my cornet in public.

Neighbors used to drop in for a call; now they call in for a drop.

"I guess we'll make port," said the sailor as he threw in another handful of raisins.

Being shot at sunrise is all right if you don't have to work the next day.

"Why don't you get out and find a job? When I was your age I was working at \$3 a week and at the end of five years I owned the store."

"You can't do that nowadays, dad; they have cash registers."

"Don't you speak to that salesman any more?"

"No! Whenever I pass him I give him the geological survey."

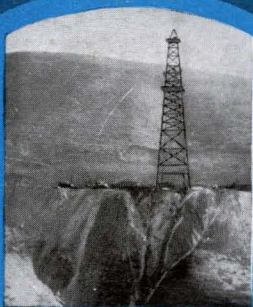
"Geological survey?"

"Yes, that what's commonly known as the stony stare."

Salesman—"You didn't know who I was down at Waco last week."

Purchasing Agent—"No, who were you?"

Gasoline long has been known as the cheapest commodity in general use in this country. American motorists are buying the lowest-priced gasoline in the world.



Typical Lufkin Baby Unit installation, Shell Oil Company of California, Freeman Lease, Round Mountain, California, wells on this lease 1600 to 2000 feet 3" tubing.



BABY IN SIZE



GIANT IN PERFORMANCE

The LUFKIN BABY UNIT

The Lufkin Baby Unit is doing a "man-size" job in California. Designed for shallow wells where powers are not practical, this unit is operating efficiently on wells 2000 feet and deeper tubed with 3" tubing and producing 250 to 400 barrels fluid daily with practically no gas pressure.

One of the major operators in California has standardized on Lufkin Units, as a result of the performance of their first few. Seventeen Units now in operation by this company.

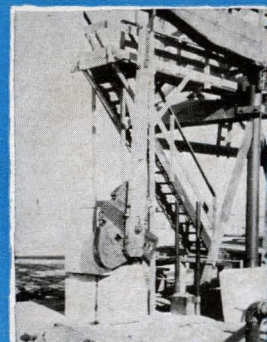
A letter addressed to Lufkin or one of our branch offices will bring full information.

California District Office:
801 Commercial Exchange Bldg., Los Angeles, California
E. P. TROUT, Dist. Mgr.

Branch Offices and Warehouses: Houston, Texas; Tulsa, Okla.; New York, New York; Odessa, Texas; Seminole, Okla.; El Dorado, Ark.

Factory and General Office: LUFKIN, TEXAS

LUFKIN FOUNDRY & MACHINE COMPANY



One of Seventeen Lufkin Baby Units in a row—Richfield Oil Co., West Front, Bakersfield, Calif., well depths 2000 to 2350 feet equipped with 3" tubing averaging 250 to 400 barrels fluid daily.